

Information Engineering Support for the Integrated Compliance Information System (ICIS)

Performance Work Statement

I BACKGROUND

The Office of Enforcement and Compliance Assurance (OECA) within the U.S. Environmental Protection Agency (EPA) is responsible for ensuring that the regulated community is in compliance with environmental regulations, individual permits, and other enforceable agreements. As part of this mission, OECA not only defines the national direction for all environmental enforcement and compliance programs but also conducts operational activities (e.g., case litigation, inspections) for these programs. These environmental programs often are implemented by our partners (states, territories, tribes, and local governments), and in those cases, OECA performs more of an oversight role rather than an operational role.

OECA has faced three fundamental challenges since its inception in 1994. First, the enforcement and compliance business has evolved from a media-specific program activity such as water or air enforcement into a multimedia and sector-based program requiring new management approaches and different methods of managing information. Second, the information system infrastructure existing at the time was insufficient to support the new methods of doing business (e.g., high cost of maintaining disparate technologies). Third, information management has evolved, forcing OECA and its regulatory partners (e.g., states and locals) to adopt new and innovative approaches to information management.

The mission of the Enforcement Targeting and Data Division (ETDD) within OECA's Office of Compliance (OC) is to provide targeting, evaluation and information resources, products and services to maximize compliance with environmental laws and to realize environmental and human health benefits. Among ETDD's responsibilities is the management of national information systems that contain detailed information on enforcement activities in both EPA regions and states. Until 2000, the systems which provided this information operated independently between the various program areas. For example, the Permit Compliance System (PCS) supported enforcement, compliance, and permitting activities under the National Pollutant Discharge Elimination System (NPDES), a mandated provision under the Clean Water Act (CWA). The National Compliance Data Base (NCDB) supported the Pesticides and Toxic Substances programs. The Air Facility System (AFS) supported air enforcement. The Enforcement Docket System (Docket) supported federally-reported, non-criminal, enforcement actions and provided information for a number of reporting requirements within OECA. Docket and many OECA systems were mainframe-based and were developed independently. Some enforcement and compliance information was entered in both Docket and the specific media systems, requiring duplicate data entry. Integration of the information between the systems was difficult.

The re-engineering of OECA information systems began as the Enforcement and Compliance Initiative (ECI). This initiative recommended that a consolidated system was needed to meet the needs of OECA. The system developed as a result of this recommendation is the Integrated Compliance Information System (ICIS). ICIS integrates most of the enforcement and compliance data used by OECA into a single integrated system.

ICIS is a highly complex and sophisticated, interactive, desk-top system supported by hundreds of related data tables, business rules, and/or files with a common architecture and applications to enter,

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access, evaluate, and distribute the information. ICIS currently has over 2,500 users nationwide who have access via an internet connection. ICIS is housed and maintained at EPA's National Computer Center (NCC) on a series of Sun, IBM, and virtualized Dell servers running AIX, Solaris, Linux, and Oracle 11g. Software is programmed in Java and PL/SQL, J2EE, Struts, JQuery, and Hibernate. There are currently four separate hardware/software environments: Production, Test, ICIS-Air Test, and Staging. ICIS includes:

- an online, web based, application which allows users to directly enter and/or modify data
- Business Objects products (Business Intelligence version 4.1, Xcelsius, Crystal Reports) for reporting and retrieval capabilities
- a data warehouse housing the NPDES data which is refreshed nightly through an ETL (Extract, Transform and Load) process
- several processes which run multiple times daily to support permit status and compliance activities
- functionality to support electronic data transfer of NPDES data, including DMRs, from states
- the National instance of the NetDMR tool and the NPDES Electronic Reporting Tool (NeT)
- the interface between ICIS and the Facility Registry System (FRS) and other EPA systems

The goal of ICIS is to meet the information management needs of OECA's enforcement and compliance program, as well as the needs of the Clean Water Act's NPDES permitting and enforcement program. Current and anticipated users of ICIS include OECA, the Office of Water (OW), the Office of Air and Radiation (OAR), EPA regions, states authorized to implement the NPDES program, and states and local agencies authorized to implement Title V of the Clean Air Act with regard to stationary sources. Some entities regulated under the NPDES program also submit data to ICIS using ICIS's electronic reporting tools.

This development project has been implemented using a phased approach, with ongoing operations and maintenance of previously-developed modules, as described below.

Phase I

Phase I of ICIS, referred to as ICIS Federal Enforcement and Compliance (FE&C), established a multimedia database with a web-based user interface. This first phase created an integrated system to support federal enforcement and compliance tracking, targeting and reporting, including annual reporting for the Government Performance and Results Act (GPRA) (e.g., pounds of pollutants reduced from enforcement cases). This phase was implemented in June of 2002, replaced several legacy systems, and continues in operation today.

Phase II

Phase II of ICIS, also called PCS Modernization, integrated the requirements of the NPDES program into ICIS by expanding on Phase I capabilities to create ICIS-NPDES. PCS Modernization was

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needed to support the EPA and state business requirements of the NPDES permitting, enforcement and compliance program. PCS was one of the Agency's largest and most complex systems, and since 1985, it served as the official national information system for managing the NPDES program. The NPDES program evolved considerably since the creation of PCS to include the traditional major sources of pollution as well as the smaller and/or non-traditional sources such as concentrated animal feeding operations (CAFOs), combined sewer overflows (CSOs), separate sanitary sewer overflows (SSOs), stormwater and pretreatment. While the NPDES program expanded, PCS did not change. Therefore, PCS lacked the functionality and data to meet the information management needs of the evolving NPDES permitting and enforcement program.

ICIS Phase II was implemented in June of 2006 for 21 "direct user" states (states that use ICIS directly to manage their NPDES program), 2 tribes and 9 territories. ICIS Phase II continued with the development of the capability to electronically transfer, or "batch", data from state systems into ICIS-NPDES using the National Environmental Information Exchange Network and eXtensible Markup Language (XML) data transfer formats. The batch release of ICIS Phase II was accomplished in three parts:

Part 1: Batch DMR for Hybrid States. *Hybrid states* are those that electronically transfer Discharge Monitoring Report (DMR) data from their state information system to ICIS-NPDES and enter all of the non-DMR NPDES data into ICIS-NPDES via the ICIS web-based data entry screens. Most hybrid states use ICIS-NPDES to directly manage their NPDES program. Implementation of the capability to batch DMRs to ICIS-NPDES was completed in May 2008 with the migration of the first hybrid state. Additional hybrid states were migrated to ICIS-NPDES in August 2008 and spring of 2009.

Part 2: NetDMR. NetDMR is an electronic reporting tool that provides functionality for regulated facilities to electronically sign and submit DMRs to ICIS-NPDES via EPA's Central Data Exchange (CDX). The NetDMR tool was developed pursuant to an Exchange Network grant managed by Texas with the participation of 11 other states, the Office of Environmental Information (OEI) and OECA. A National instance of NetDMR operates as a module of ICIS, and is hosted on EPA's CDX servers. States also have the capability to locally host the NetDMR tool, while still relying on ICIS-NPDES for the data flows. EPA is responsible for the National instance of NetDMR only. Implementation of the National instance of NetDMR occurred in the second quarter of FY2009.

Part 3: Full Batch States. *Full Batch states* have their own systems to manage the NPDES program and electronically transfer all of their NPDES data from their state systems via CDX to ICIS-NPDES. These states transfer DMR data as well as all other data families in ICIS-NPDES. There are currently 22 full batch states. The Full Batch capability was released into production in December of 2012.

Phase III

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Phase III, also known as AFS Modernization, is modernizing and integrating the Air Facility System (AFS) into ICIS by creating a new module known as ICIS-Air. AFS has long been used by EPA and States and local governments to track Clean Air Act enforcement and compliance activities for major stationary sources of air pollution. Integration of AFS into ICIS will modernize an old, difficult-to-use system that does not meet current program business needs. AFS is EPA's database for compliance and enforcement data, as well as a limited amount of permit data, for stationary sources of air pollution regulated by EPA, state and local air pollution control agencies. The environmental regulatory community uses this information to track the compliance status of stationary, or point, sources with various programs under the Clean Air Act (CAA).

Although Phase III requirements, design, and development work has been underway for several years, ICIS Phase III will begin to be realized with the planned deployment of ICIS-Air Release 1 into production in October of 2014. ICIS-Air Release 1 will provide all the core functionality of AFS, and will include a web interface, modern system-to-system data exchanges, and full integration within the ICIS computing environment. Data for all organizations using AFS will be migrated from AFS into ICIS prior to the deployment of ICIS-Air Release 1. AFS will be decommissioned soon thereafter.

Subsequent releases of ICIS-Air will add more functionality to meet emerging needs of the CAA Stationary Source enforcement and compliance program, keep the system current with policy and programmatic changes, implement enhancements and capability deferred from Release 1, correct problems discovered post Release 1, perform data corrections deferred from the final migration of AFS data to ICIS, strengthen the system's electronic reporting capabilities, and enable support for the Agency's E-Enterprise initiative. Full development of ICIS Phase III is expected to be completed in FY 2016.

II PURPOSE

The purpose of this Performance Work Statement (PWS) is to continue the operations, maintenance and enhancement of ICIS Phases I and II and all associated electronic reporting tools and web services, while finalizing the ICIS-Air functionality under ICIS Phase III to complete the remaining programmatic requirements from the modernization of AFS. It is anticipated that, near the start of fiscal year 2015, ICIS will support FE&C and NPDES users nationwide, and will also support a large majority of all former users of AFS.

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III SCOPE

The contractor shall support ETDD in its effort to continue to modernize AFS via integration into ICIS as well as provide ongoing operations, maintenance and enhancement support for ICIS and all its modules, tools, and capabilities. This includes the following activities, as well as others:

- The contractor shall provide support for the Operations and Maintenance of the production ICIS to include all online, web-based, functionality; the Business Objects (BO) component used for reports and retrievals; overnight processes; various data warehouses and nightly ETL (Extract, Transform, and Load) processes; dashboards; functionality for electronic data transfer and other web services; the National instance of the NetDMR Tool; the NPDES eReporting Tool (NeT); the interfaces between ICIS and other systems, such as the Facility Registry System (FRS); and all system infrastructure. The contractor shall complete the task to update the “look and feel” and usability of ICIS for remaining overlapping modules and as many NPDES specific modules as the budget will permit. The contractor shall implement system enhancements generated as a result of ongoing and outstanding Defect and Change Requests identified by EPA and the ICIS user community as they use ICIS to manage their day to day activities. In addition, the contractor shall implement system enhancements needed to support the integration of Phase III (or ICIS-Air) requirements as directed by EPA.
- The contractor shall complete the remaining requirements from the implementation of ICIS-Air Release 1. This may include requirements and capabilities deferred from Release 1 such as the incorporation of recent CAA policies changes, implementation of deferred change requests and problem fixes, corrections to problems and processes discovered upon and/or after implementation, data corrections deferred from the migration of AFS data to ICIS-Air, completion of an ARS Archive providing users with access to AFA data within the ICIS Business Objects reporting tool architecture, and converting the existing FRS data transfer capability to using web services.
- The contractor shall support the re-issuance of the Multi-Sector General Permit and further changes to ICIS and/or NeT required by changes made to the permit prior to its re-issuance. It is anticipated that additional permits will be identified for integration into NeT during the performance of this PWS. The contractor shall support EPA in the requirements and integration of these tools into NeT and ICIS.
- The contractor shall provide a variety of support to EPA to ensure the system meets technical and programmatic performance expectations, and to ensure that the system always remains technically and programmatically up to date.

The user community of ICIS consists of EPA Headquarters, regional and state managers and staff; delegated Air local agencies, and indirectly, regulated facilities which use the NPDES electronic reporting tools. To keep ICIS up and running (operational) and to support future phases and releases of ICIS, it is critical that the system be adequately maintained and enhanced as requirements and resources are identified and available.

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The following is a general outline of the tasks to be performed:

- Task Area 1: Project Management
- Task Area 2: Transition Plan Implementation
- Task Area 3: Detailed Design Development
- Task Area 4: Data Migration Support
- Task Area 5: Software Technical Specifications Development
- Task Area 6: ICIS Software Development
- Task Area 7: Software, System Components, and Processes Testing
- Task Area 8: Implementation of ICIS Phases
- Task Area 9: Batch Processing Alternatives Support
- Task Area 10: ICIS Operations and Maintenance Support
- Task Area 11: ICIS Enhancements
- Task Area 12: Training

The contractor shall comply with the following:

- The contractor shall work in coordination with staff from the EPA's Office of Environmental Information (OEI), the EPA's National Computer Center (NCC), offices within EPA's Office of Air and Radiation (OAR), other offices within OECA, EPA regional and delegated agency staff, and other contracting staff as necessary throughout the completion of the work specified in this PSW to ensure requirements and design reflect the EPA's technical infrastructure. The EPA shall provide all system access and access to Agency personnel as necessary to fulfill the requirements of this PWS.
- The contractor shall provide all data, software (deployment files, support files, and source code files), documentation, reports and notes developed or collected during the performance of this PSW to the EPA. All project documentation deliverables shall be prepared using Agency standard software packages (i.e., MS Word, MS Excel, MS Project, MS Power Point, and MS Visio).
- Unless otherwise indicated by the EPA, deliverables shall be provided electronically. Unless otherwise indicated by the EPA, all deliverables shall be provided to the EPA in a draft version, allowing two weeks (ten business days) for the EPA to review and return comments to the contractor. Comments provided by the EPA shall be incorporated into the deliverable and a final version developed and submitted back to the EPA within two weeks of the contractor receiving comments.
- All software shall be delivered in both source and executable formats. The contractor shall provide the case tool database or file containing information entered into, or generated by, the case tool in the performance of the PWS. This includes, but is not limited to, electronic files from software used to create deliverables, manage requirements, and document the design.

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- In situations where the contractor has direct interaction with other government personnel, the contractor shall wear proper identification at all times (the badge should contain the individual's name, along with the name of his/her company, and/or the company logo), verbally identify him/herself and the company they represent before any meeting or phone call begins, identify him/herself as a contractor, especially over the phone, and attend only those portions of a workshop or conference essential to the successful completion of the Task.
- The contractor shall not release any information acquired during this contract, including data that is considered by the Agency to be enforcement sensitive, to any party without prior approval to the EPA. It shall be the contractor's responsibility to provide updated information as personnel are changed on the project.
- The contractor shall work with the EPA and Subject Matter Experts (SMEs) on all aspects of the project. The EPA will be the lead on the ICIS-Air Electronic Data Transfer (EDT) Integrated Project Team (IPT) composed of key project personnel to provide consultation and review of deliverables. The contractor may be asked by EPA to communicate directly with workgroup members.

IV DESCRIPTION OF TASKS

TASK AREA 1- Project Management

The purpose of this task is to ensure the contractor's successful completion of all work under this PWS.

The contractor shall:

- a) Be responsible for managing cost within the approved budget parameters. The contractor shall maintain project and task level schedules to plan and track progress of work being performed on this PWS including a Work Breakdown Structure (WBS) and associated work packages for each phase (or task) of the project. This includes an Integrated ICIS Project Schedule which integrates and coordinates all work scheduled to be performed on ICIS as part of this PWS.

As part of building the ICIS Integrated Schedule, the contractor shall review and update the Long Term Planning Initiative. The purpose of the Long Term Planning Initiative is to lay out the major O&M activities that need to be accomplished over the next year and then integrate those activities and associated timelines into the ICIS Integrated Schedule for FY2015.

The contractor shall provide early warnings to the EPA TOCOR on potential areas of problems that could result in a slippage or cost overruns. These warnings shall be within a timeframe that EPA and the contractor can react to control, and affect, the outcome.

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- b) Attend bi-weekly ICIS progress meetings with the TOCOR and other relevant EPA staff as determined by the TOCOR. The contractor shall prepare progress meeting notes describing activities for that period, staffing changes, progress on deliverables and schedule and any new or previously unresolved issues that shall be addressed. The notes from the previous week's meeting will be reviewed and approved at the start of each meeting.

Progress meeting notes shall be delivered to the TOCOR electronically within three (3) business days of the progress meeting. The TOCOR will review the notes and either approve them in writing via e-mail or provide suggested changes to the contractor. The contractor shall incorporate the TOCOR's changes and deliver the revised progress meeting notes at least two (2) days prior to the next schedule meeting.

- c) Attend senior program management meetings with the TOCOR, the TOCOR's office, division and branch level management to review and discuss overall project management, status and issues. The contractor shall prepare and deliver to the TOCOR and CO meeting notes highlighting any issues and/or action items discussed. These meeting notes are due to the TOCOR within five (5) business days after the meeting. The TOCOR will review the notes and either approve them in writing via e-mail or provide suggested changes to the contractor. These meetings shall be held periodically as scheduled by the EPA TOCOR; the number of which will not exceed two within this PWS.
- d) Provide a monthly status report for this PWS to the TOCOR, no later than the 18th of the month after the end of the month being reported. This report shall include a description of activities, resources expended by task and sub-task and labor category, progress on deliverables, and any issues that shall be addressed. This report should additionally include information on sizing estimates (i.e., what is being used and how this estimate is affecting the schedule, scope and cost of the project).
- e) Provide a monthly financial report for this PWS no later than the 18th of the month after the end of the month being reported, to include a breakdown of the hours and funding (both budgeted and actual) expended on the project by task and sub-task, if applicable, for that month and totals of what has been expended to date under this Task Order.
- f) Provide Earned Value Measurement (EVM) statistics to include 1) Budgeted Cost of Work Scheduled (BCWS/PV), 2) Budgeted Cost of Work Performed (BCWP/EV), 3) Actual Cost of Work Scheduled (ACWS), 4) Actual Cost of Work Performed (ACWP/AC), 5) Cost Performance Index (CPI), and 6) Schedule Performance Index (SPI). These statistics shall be reported for the month by task and be cumulative by PWS and at the project level. The contractor shall notify the TOCOR and CO at least one (1) month in advance whenever the contractor expects the SPI and/or CPI to be outside the 10% threshold and provide written justification.

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- g) Maintain a list of all Change Requests and Defects identified by users during regular monthly user conference calls, contacts through the ICIS User Support mechanism (ie: Software Problems, suggested changes, etc.), and brought up during the weekly Issue Resolution Meetings. Change Requests and Defects can also be identified by EPA technical staff and by the contractor staff during the course of performing their daily work or via interactions with users. These issues are received using the Change Request form and describe the issues identified. These Change Request forms are discussed during project management meetings, Issue Resolution meetings, or more often for urgent issues. The contractor shall identify risks, issues, and change requests for each program area (i.e., Federal Enforcement and Compliance, NPDES, Air, NeT or NetDMR) of ICIS; and maintain/track them in a database along with status, resolution, impact. The contractor shall maintain the report that contains the Title, Description, Priority, and Impact of each issue. This report is known as a Change Request Report. The status of requests on this report shall be discussed as part of the bi-weekly project meetings, with high priority items (those having an effect on schedule or budget) being discussed in the program management meetings.
- h) Manage the quality (completeness, correctness, and consistency) of all deliverables for this PWS, ensuring that the deliverables meet project requirements in content and format and are delivered on schedule. The contractor shall provide the EPA TOCOR with the results of the quality assurance assessment of deliverables upon request.

| Task Area 1 Deliverables | Due Dates |
|---|--|
| Integrated ICIS Project Schedule | Within 6 weeks of TAS Start Date; with updates as needed |
| Sub-Task Schedules | As Sub-Tasks are defined |
| Progress Meeting Notes | Bi-weekly, within 3 business days of meeting |
| Program Management Meeting Notes | Within 5 business days of meeting |
| Monthly Project Status Report | 18 th of each month |
| Monthly Project Financial Report | 18 th of each month |
| Change Request Reports | Monthly |
| Monthly EVM Statistics | Monthly |
| Quality Assurance Assessment of Deliverable | As Requested |

TASK AREA 2 – Transition Plan Implementation

The purpose of this task is to ensure that the contractor develops and, as directed, implements a plan for smoothly and efficiently transitioning the work on ICIS from one contractor to another, and as needed, from one contract vehicle to another. Due to the size and complexity of ICIS, it is critical that the contractor demonstrate how they will ensure smooth transition of the work without jeopardizing the ongoing operations and development of ICIS. This task is two-fold:

- a) The contractor shall, at the end of the contract, develop an Outgoing Transition Plan which

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provides their approach to transitioning the operations, maintenance and development of ICIS while minimizing the impact to ICIS user community. This plan shall include, but is not limited to, the following:

- Milestones and deliverables
 - Status of all deliverables and activities
 - Plan for knowledge transfer
 - Training Plan
 - Identified resources for supporting transition activities
 - Documentation inventory
 - Identification of, and schedule for, recommended meetings and briefings with new contractor
 - Identification of wrap-up activities
 - Memorandum of Understanding between contractors
 - Identification of all applicable licenses, passwords, configuration and build instructions, information on the use of CDX for ICIS, all other system interfaces, scripts, backups, trouble reports, transaction logs, and all other applicable system documentation, procedures, and instructions
 - Definition of what constitutes successful completion of transition
- b) Upon acceptance of the final plan, and receipt of technical direction to implement the plan, the contractor shall implement the transition plan.

| Task Area 2 Deliverables | Due Dates |
|------------------------------------|--|
| Draft Outgoing Transition Plan | 2 weeks after notification of closeout from TOCOR |
| Final Outgoing Transition Plan | 1 weeks after receipt of comments from EPA |
| Implement Outgoing Transition Plan | At acceptance of Final Outgoing Transition Plan and per direction from the TOCOR |

TASK AREA 3 – Detailed Design Development

The purpose of this task is to update and document changes needed to the Detailed Design for ICIS. Utilizing system modernization Needs Analyses, Business Cases, Alternative Analyses, current system requirements and functionality, current system documentation, meetings with Subject Matter Experts within EPA and state and local governments, the contractor shall document the scope and functionality of the design changes to ICIS. A work group, composed of EPA technical staff and selected system users, will be convened to review and comment on the Detailed Design. The contractor shall ensure that all updates to the Detailed Design for ICIS are developed in line with the existing ICIS functionality and architecture. The contractor shall develop updates to the design of ICIS which are efficient, complete and adhere to standards set forth for implementing and securing systems in the EPA shared environment.

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The contractor shall perform the following tasks in updating the ICIS Detailed Design:

- a) The contractor shall review the existing functionality of the system, and the current, future requirements of the specific enhancement to determine the required scope of the new functionality.
- b) The contractor shall develop a Requirements paper for the functionality and/or data to be added or enhanced.
- c) The contractor shall identify outstanding design issues and recommend resolutions.
- d) The contractor shall define the screen layouts, functionality, report definitions, business rules, other system interfaces, physical data structures (updates to existing structures and new tables), data dictionary updates, changes to data flow schemas, and reports. These screens, reports, and data flows must follow the existing standards and methods in place for ICIS and conform to all relevant Agency data standards.
- e) The contractor shall support the work group, composed of EPA technical staff, regional users and state/local users, convened for the purpose of reviewing changes to the detailed design. The contractor shall review and consolidate all comments received from the workgroup and include them as an appendix to the detailed design document. The contractor shall update the detailed design to reflect user comments as requested by the TOCOR or EPA designated technical lead.

| Task Area 3 Deliverables | Due Dates |
|--|--|
| Requirements/Design Papers | Within 2 weeks of request |
| Design Issues Papers | As needed |
| Draft Updates to ICIS Detailed Design Document | Per the task schedule |
| Revised Updates to ICIS Detailed Design | 2 weeks after receipt of comments from EPA |

TASK AREA 4: Data Migration Support

The purpose of this sub-task is to support the migration, conversion, and reconciliation of data from Legacy AFS to ICIS-Air for all EPA Regions, states, territories, tribes and local agencies migrating to ICIS upon implementation of ICIS-Air. For the purposes of this TAS, the contractor shall support the EPA in the review of the results of the Production data migration iteration for ICIS-Air. For those change requests that it was agreed upon ahead of time could be done via data corrections after the data was migrated, the contractor shall develop and execute those data correction scripts at the request of the TOCOR. The contractor shall provide analysis of the final threshold and error reports.

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The contractor developed and followed a plan for migration under the previous PWS to create and update the documentation for the data migration process and software as necessary to support EPA Regions, states, tribes, territories, and local agencies in preparing their data for migration. In addition, 6 test iterations and one final migration to production were performed.

The activities the contractor shall perform as part of this task are as follows:

- a) Maintain the migration test environment created under the previous PWS until all analysis has been completed of the production migration of AFS data to ICIS-Air.
- b) Update final mapping documents and cross reference table mappings for the data migration of AFS data into ICIS-Air.
- c) Support a final meeting of the ICIS-Air Data Migration Team by participating in discussion and generating minutes for the meeting.
- d) Develop, unit test, and execute software and processes that will correct data due to change requests for the data migration software that were determined to be better supported via data fixes after the last migration into production.
- e) Complete the design, development, and support of an AFS Active Archive to contain all AFS Legacy data in “look alike” Oracle tables with a Business Objects universe and applicable objects for use by ICIS-Air users to view and/or extract any of their data that was in Legacy AFS using Business Objects. The AFS Active Archive will be created on an ICIS server designated by the EPA Technical Lead.

| Task Area 4 Deliverables | Due Dates |
|--|--|
| Updated Mapping documents | Within 2 weeks of request |
| Workgroup Meeting Minutes | 3 business days after meeting |
| Data Correction Scripts | TBD |
| AFS Active Archive and associated universe and objects | Per the revised ICIS-Air Schedule Developed under the previous PWS |

TASK AREA 5 – Develop Software Technical Specifications

The purpose of this task is to develop and document the Software Technical Specifications for new functionality, changes and/or enhancements to existing functionality, and defect correction to ICIS from which the software can be developed. Utilizing the Detailed Design for the new program if applicable (e.g., ICIS-Air for Phase III), input from the appropriate Subject Matter Experts at EPA, and any applicable industry standards for software design, the contractor shall develop and document the software technical specifications for the new phases of, or capabilities within, ICIS. All technical

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specifications will be developed using tools which support a standard structured approach to systems development and software design in the ICIS hardware/software environment.

The contractor shall perform ongoing technical analysis and update the technical specifications of the specific processing functions and procedures for ICIS as changes arise from defects discovered during the testing phases, from the ICIS maintenance, or from changes to EPA policy or data standards.

Depending on the alternative selected for developing the technical specifications, the schedule of deliverables may change. For example, it may be more expedient to develop the software technical specifications by data family or by business function than to develop the specifications all at once.

5.1 Software Technical Specification for Electronic Data Transfer Functionality

The contractor shall draft and finalize Software Technical Specification documents for Electronic Data Transfer (EDT) functionality of a new data family to be added to FE&C, ICIS-Air or ICIS-NPDES. For existing EDT data families requiring changes to business rules, transactions types, etc., the contractor shall update and finalize the existing Software Technical Specification documents. In performing this task, the contractor shall consider and use all appropriate sources of information, such as: prior ICIS-NPDES Batch or ICIS-Air Software Technical Specifications; ICIS Batch Architecture and Design documents; Gap Analyses; input from subject matter experts at EPA and EPA's state and local partners; existing ICIS-NPDES and ICIS-Air schemas posted on EPA's ICIS web site; software modules and business rules developed as part of the online data entry functionality of ICIS, and all software development standards and procedures.

In designing new EDT processes, the contractor shall utilize the version of system code as of the start date of the task and take into account any impacts to the existing ICIS system. New processes shall be designed to have minimal impact on the existing application and processes as well as the direct state and local and EPA user communities. In addition, the design of such processes must take into account the current schedule for daily, overnight and weekend processing. All new software and processes associated with EDT functionality must be optimized during design and through development and implementation to operate in an efficient manner as possible. In all work related to enhancing and adding capability to ICIS, the contractor shall strive to make the changes and enhancements efficient from both the users' perspective as well as efficient from the system performance perspective. The contractor shall use any lessons learned from prior implementations of EDT functionality to define and staff this task so as to achieve timely software products with a high degree of correctness.

All data being transmitted from state and local systems to ICIS will go through EPA's Central Data Exchange (CDX) facility managed by OEI. CDX will be responsible for security, up-front validation of the XML or schema, logging and archiving of data, sending the data to the ICIS node, receiving status and files from ICIS EDT and sending communications to the state/local user upon receipt of their data. The contractor shall participate in design/specification meetings set up by the TOCOR with OEI/CDX and their contractors to review and finalize the changes to processes, procedures, and software that will be required to implement electronic data transfer processes and maintain them throughout this task order.

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When formally directed, the contractor shall perform the following activities:

- a) The contractor shall complete a “Gap Analysis” or review of the ICIS online functionality and business or validation rules against the draft schema files for all data families, documenting any additions and changes needed. This gap analysis shall include all data families as directed. Existing validation code from the ICIS online and EDT functionality shall be used where possible.
- b) The contractor shall review the data requirements by data family and develop a recommended approach and plan for the development of the Software Technical Specifications to include the order and priority of development for each data family and accommodate the business requirements that ICIS supports.
- c) The contractor shall review and update the ICIS Software Technical Specifications as they apply to the flow of data from states and locals to ICIS. This technical specification shall include:
 - 1) updated architecture for the electronic data transfer of data into ICIS
 - 2) the design of the EDT Processing software and procedures using, as appropriate, flow charts, pseudo-code and/or use cases, object module definitions and diagrams, final screens and report layouts, database updates
 - 3) mappings with business rules for each field of the XML instance documents plus rules for populating ICIS tables and documenting the details of how the required functionality will be accomplished in the system
 - 4) a listing of error messages/causes/fixes for all errors arising from the parsing of the XML files by ICIS, and incorporating feedback from the IPT review of draft error messages
 - 5) design and definition of security layer between ICIS and CDX
 - 6) discussion of major design decisions to include pros, cons and recommendation with justification. This information must be provided to EPA in draft prior to final decision making to allow time for input from EPA technical staff
 - 7) discussion of the selection of technical tools and methods including pros, cons, and recommendations with justification. This must be provided to EPA in draft prior to final decision making to allow time for input from EPA technical staff
 - 8) listing of existing ICIS methods to be reused for data validation by data family
 - 9) listing of existing ICIS EDT methods to be used for data or XML file validation by data family
 - 10) listing of new methods with description of how they are to be implemented by data family
 - 11) mappings of XML tags into ICIS table columns by data family
 - 12) EDT Audit Report layouts and/or method of returning errors to users submitting via EDT
 - 13) details of error processing.

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5.2 Software Technical Specification for ICIS Web Functionality

The contractor shall review, update and complete the draft Software Technical Specification for ICIS Web Functionality. In performing this task, the contractor shall consider and use all appropriate sources of information, such as existing documentation and existing Web functionality.

The contractor shall perform the following activities as part of this sub-task:

- a) The contractor shall review the data and functional requirements and develop a recommended approach and plan for the development of the Software Technical Specifications to include the order and priority of development for, and/or update of, each module.
- b) The contractor shall define the overall software technical design and develop the definition of the overall technical design and solutions for building and integrating new functionality into ICIS. This task includes following ICIS screen standards (i.e., headers, footers, navigation, security, bread crumb strategy) and maintaining full consistency with ICIS exception handling techniques, overall system security handling, common code and procedures, system parameters, web services design and infrastructure to include database code design.

As part of this overall software technical design, the contractor shall define the technical specifications for any interfaces to Agency systems as defined in the Detailed Design, overall ICIS system security framework, any specific archival functions, and the existing ICIS interface strategy. For each new and/or updated functionality, the contractor shall define the software specifications for the input, update, and retrieval of data, to include definition of the relevant modules, development of use cases and/or pseudo code, definition of the screens and relevant XML schemas, security updates, interfaces, and database updates to include:

- 1) updated architecture for any electronic transfer of data into ICIS
- 2) the design of the software and procedures using, as appropriate, flow charts, pseudo-code and/or use cases, object module definitions and diagrams, final screens and report layouts, database updates
- 3) mappings with business rules for each new data field plus rules for populating ICIS tables and documenting the details of how the required functionality will be accomplished in the system
- 4) discussion of major design decisions to include pros, cons and recommendation with justification. This information must be provided to EPA in draft prior to final decision making to allow time for input from EPA technical staff
- 5) discussion of the selection of technical tools and methods including pros, cons, and recommendations with justification. This must be provided to EPA in draft prior to final decision making to allow time for input from EPA technical staff
- 6) listing of existing ICIS methods to be reused for data validation by data family
- 7) listing of new methods with description of how they are to be implemented by data

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- 9) screen layouts
- 10) updates to the EDT System Administration Module

| Task Area 5 Deliverables | Due Dates |
|---|--|
| Draft SW Technical Specifications for EDT | Per the Task Schedule |
| Final SW Technical Specifications for EDT | 2 weeks after receipt of comments from EPA |
| EDT Draft Schema or Enhanced Schema | Per the Task Schedule |
| Draft SW Technical Specifications for Web | Per the Task Schedule |
| Final SW Technical Specifications for Web | 2 weeks after receipt of comments from EPA |
| Updated Systems Architecture Document | As part of final SW Technical Specifications |
| Updates to the ICIS Design Document | As part of final SW Technical Specifications |
| Design Decision Papers | Bi-weekly during tech spec development |
| Updated Data Flow Configuration Document | Per the Task Schedule |

TASK AREA 6 – ICIS Software Development

The purpose of this task is to develop the new software application and procedures releases for ICIS based upon the Software Technical Specifications and Design Documents developed or updated under Tasks 3 and 4, and the ICIS Integrated Schedule. All software shall be developed adhering to the software standards set forth for ICIS. New releases of ICIS shall be integrated into ICIS minimizing the changes necessary to existing software modules and business rules; in other words, new software and processes should be refined to have minimal impact on the existing application and processes as well as the existing user community. In addition, any addition and/or revision of the software must utilize existing software and take into account the current schedule for daily, overnight and weekend processes. All new software and processes associated with a new release of ICIS must be optimized during revision and implementation to operate in as efficient manner as possible. In all work related to enhancing and adding capability to ICIS, the contractor shall strive to make the changes and enhancements efficient from the users' perspective as well as efficient from the system performance perspective. All software and procedures shall be thoroughly tested; there shall be no known Severity 1 or 2, or high priority Severity 3 problems left open by the contractor prior to delivery to the EPA for Test and Acceptance by NCC, EPA staff, and pilot states/locals.

All software shall be developed and/or revised according to the software standards set forth for ICIS taking advantage of current system infrastructure tools and capabilities. The contractor shall define common routines where possible and reuse applicable modules from the current online ICIS system.

All software must be thoroughly documented both internally (via explanatory comments) and externally to ease future operational and maintenance activities as well as enable expansion activities. The TOCOR will verify that all changes required by the EPA resulting from a review of the code delivered for deployment have been made.

The contractor shall provide deployment files (e.g., EAR, WAR, BO Universes, BO Reports, configuration files), support files (e.g., JIRA files, documentation on deployment files), and source code files (e.g., all programming files used to create EAR, WAR, and BO files) for each deployment into the Production ICIS Environment.

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- a) For ICIS-Air, the contractor shall develop the software and processes for deferred ICIS-Air components as requested by the TOCOR and defined in the SW Technical Specifications for ICIS-Air, and integrate this functionality into ICIS. As directed, the contractor shall also develop software and processes for ICIS FE&C and ICIS-NPDES components, per their Software Technical Specifications. This may include:
- supporting the capability to retrieve incoming submission files from CDX via web services
 - performing parsing and validation of incoming data in XML format against business rules and mapping provided in the technical specifications
 - continuing a messaging capability to inform submitters of the receipt and processing completion of their submissions via web services
 - continuing a system administration capability to monitor EDT status history and send messages to CDX
 - applying updates to ICIS-Air and/or ICIS-NPDES warehouse database from all valid incoming transactions
 - logging of field and record rejections in an historical file
 - creation of error report listings and audit reports using Business Objects.
 - creation of XML transactions containing resulting errors for transmittal back to the user
 - new Web functionality to support additional CAA stationary source enforcement and compliance activities, NPDES programmatic requirements, or federal enforcement and compliance requirements.
- b) The contractor shall perform a preliminary security scan on the software prior to deployment in the ICIS Test environment. The contractor shall provide the results of the security scan to the EPA TOCOR and NCC security expert and shall incorporate the changes required by NCC and the EPA staff into the software, perform any retesting necessary and resubmit the software for approval to the TOCOR. The application must be provided to NCC for their security scanning and review three weeks prior to deployment into the ICIS Production environment. The contractor shall make changes required resulting from that security review prior to deployment.
- c) The contractor shall track all errors and changes to the software and processes utilizing the ICIS Change Control procedures.

| Task Area 6 Deliverables | Due Dates |
|---------------------------------|---|
| Draft Release Software | Per the Task Schedule |
| Revised Release Software | 3 weeks after receipt of EPA and NCC comments |
| Change Report | Bi-weekly during Project Management Meetings |

TASK AREA 7 – Test Software, System Components and Processes

The purpose of this task is to ensure that ICIS release software, architecture, and procedures have been fully tested based upon well-defined Test Plans. This task includes the correction and retesting of problems found during the various testing phases. The contractor shall use lessons learned from prior

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ICIS Phases and release implementations to define and staff the Testing task in order to achieve optimum and timely testing and subsequent correction of problems.

For each release of ICIS:

- a) The contractor shall develop a comprehensive test plan and develop software tools, as necessary, for the execution of that test plan. The test plan shall provide a comprehensive approach to accomplishing functional testing, system testing, beta testing, integration testing, regression testing, user validation testing (UVT), and user acceptance testing (UAT). The test plan shall include specific test cases and expected results from each test case. The contractor shall include sufficient test cases/scenarios to verify that the new ICIS software, database, procedures, and interfaces have been thoroughly tested and verified. For any data flows from state and local systems to ICIS, the test plan should include steps for testing CDX uploads using files provided by pilot participants, if available, and/or “mocked up” by the contractor.
- b) The contractor shall perform functional, integration, system, and regression testing of the ICIS release, fully exercising the test plan created in Step a). The contractor shall document the test results and provide them as an addendum to the test plan. The contractor shall log and track in the Change Tracking database all defects and necessary changes which are a result of testing. The contractor shall make the necessary changes to the software and/or processes based upon the test results and retest to verify that the revised software and procedures work as required.
- c) The contractor shall support EPA, and potentially a regional and/or state and/or local user, in their beta testing of the ICIS release. Beta testers will test that the application is functionally correct and is acceptable from a user’s perspective. The contractor shall make the necessary changes to the software and/or processes based upon the test results.
- d) The contractor shall perform Load Testing of the new ICIS release. In conjunction with OEI staff and their contractor(s), NCC staff and ICIS Team Technical staff, the contractor shall develop a Load Test Plan, develop Load Test test cases and data, and conduct load testing of the new ICIS release, and hardware configuration. The contractor shall document the results incorporating recommendations for improving performance and/or procedures. Based upon changes required to improve performance, the contractor shall make the necessary changes to the processes and software.
- e) The contractor shall support the final code review by NCC of each new ICIS release, make all required modifications to the software or procedures arising from the review, retest, and track these changes utilizing the ICIS Change Control procedures.
- f) The contractor shall provide technical support during User Acceptance Testing (UAT) in the verification of user testing and modify software and/or processes as necessary to correct errors identified by the User Testers. For testing the transmission of programmatic data from a federal/state/local system to ICIS and in cooperation with staff from CDX and their contractor, regions/states/locals and their contractors, and other technical EPA staff designated by the TOCOR, the contractor shall conduct User Validation Testing (UVT) and User Acceptance Testing (UAT) in the form of “end to end” testing.

Additionally, the contractor shall:

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- track all errors and changes utilizing the Change Control procedures
- refresh the Test database with data migrated for the regions/states/locals prior to UVT and UAT
- establish procedures based upon the methodology in the Test Plan
- provide technical support to the UVT and UAT Testers
- modify software and/or processes to correct errors identified by the UVT and UAT Testers and EPA, based upon the methodology documented in the Test Plan

If EPA and other participating government organizations determine at the end of UVT that the data meets acceptable thresholds and the system functionality operates correctly and efficiently, EPA may decide to forego a separate UAT or cut the timeframe and activities back. Problems found during EPA and user testing will be corrected by the contractor and retested by the contractor and EPA prior to deployment.

- g) The contractor shall deliver the new and/or enhanced software to NCC for a security scan a minimum of three (3) weeks prior to the implementation date. The contractor shall make all changes required as a result of that security scan and retest prior to deployment into the ICIS Production environment.

| Task Area 7 Deliverables | Due Dates |
|---|--|
| Draft Test Plan | Per the Task Schedule |
| Final Test Plan | 2 weeks after receipt of comments from EPA |
| Test Plan Addendums for Test Cases with Results | 2 weeks after each testing phase |
| Revised SW and Procedures from Each Phase of Testing | Per the Task Schedule |
| All SW deliverables, all deployment files, support files, and source code files | 1 week after deployment to production |
| Load Test Report | 2 weeks after completion of Load Testing |
| Final SW for Security Screening | 3 weeks prior to deployment to production |
| Change/Defect Report | Bi-weekly during Testing |

TASK AREA 8 – Implementation of ICIS Phases Support

The purpose of this task is to provide technical assistance to EPA to prepare for successfully transitioning a new phase or release of ICIS from the development environment through test to production. In conducting this task:

- a) The contractor shall develop a Deployment Checklist for transitioning the phase or release of the ICIS into the production environment. This Checklist shall include a list of specific tasks, an estimated start and completion date and time for each task, task duration, and who is responsible for each task. This Checklist shall include data migration activity if data must be migrated from a legacy system. A draft will be reviewed by EPA and NCC staff. The contractor shall incorporate comments and changes received from the TOCOR and other designated EPA staff, and shall deliver a final Checklist.
- b) The contractor shall provide technical support for the installation of the ICIS software and set up

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procedures on EPA equipment. While actual installation of the software into EPA's environment must be done by NCC staff, the contractor shall provide technical assistance by helping to analyze problems and solutions, and developing special utilities and procedures.

- c) The contractor shall provide ongoing support in rapidly resolving any issues/problems that occur during implementation across the user community, who, depending on the release of ICIS, may include EPA Headquarters, regional and state and local users. The contractor shall:
- provide technical support in the form of troubleshooting the system
 - revise and install processes and/or software to correct problems or resolve issues
 - monitor regularly scheduled processes
 - conduct periodic performance testing
 - recommend future infrastructure scalability specifications
 - update documentation.

The contractor shall provide this support via telephone, electronic mail, web conferencing, remote access to the system, on site consultation, and other means as required.

- d) The contractor shall input and track in the Change Control database through resolution all changes to software and procedures that have resulted from problems or issues encountered during implementation, providing the TOCOR with Problem Reports.

| Task Area 8 Deliverables | Due Dates |
|---------------------------------------|--|
| Draft Deployment Checklist | Per the Task Schedule |
| Final Deployment Checklist | 2 weeks after receipt of comments from EPA |
| Revised Software | Upon Deployment |
| Revised HW/SW Settings and Procedures | Upon Deployment |
| Change and Problem Reports | Bi-weekly after the start of this task |

TASK AREA 9 – Batch (Electronic Data Transfer) Processing Alternatives Support

The purpose of this task is to support the maintenance and expansion of the NeT tool. NeT uses two COTS software packages which support a development methodology that is quicker and less expensive than traditional methods, has an architecture extensible enough to meet the needs of all types of electronic reporting proposed under the NPDES Electronic Reporting Rule, and has been placed into production with some changes to the overall architecture required to support NPDES general permits that need to be added to NeT. In addition, in conjunction with Task 9 (Operations and Maintenance Support), the ICIS-NPDES application may need to be expanded to store new data elements required under the proposed NPDES Electronic Reporting Rule and/or resulting from the analysis of Appendix A of the Rule.

The first form developed for the initial production release of NeT was Region 6's Offshore Oil and Gas general permit which required some customized code to populate ICIS with limits and did not include functionality for populating ICIS with program reports, permit components or a review process for Regulatory Authorities. NeT will ultimately host hundreds of forms for the regulated community to fill out and needs to be expanded to provide generalized code for populating limits, permit components,

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program reports and permit schedules and offer features such as pre-populated data within the forms and routing of forms for approval and disapproval and customized subscriber agreements under EPA's Cross Media Recordkeeping Requirements (CROMERR) digital signature and user account management requirements.

The contractor shall support ETDD in its rulemaking effort by completing the NeT tool functionality to capture Federally required data from permit applicants and populate the tables in the ICIS-NPDES system with this data, providing assistance to EPA staff in developing forms, implementing web services and functionality to populate permits, components, permitted features, limit sets, limit set schedules and parameter limits in ICIS-NPDES, reviewing work flow processes, promoting forms and processes into production, and troubleshooting issues for future NOI and program report forms and work flow processes.

The contractor shall work with ETDD and CDX technical staff as necessary to develop, test, and implement the CRs and fix the DRs identified at the start of this TAS, and during this TAS, using best practices, and to identify additional requirements and design changes for incorporating the Storm Water Multi-Sector Master General Permit (SW MSGP) and providing support to EPA staff in their design, development, testing and implementation of other state and Federal electronic NOI forms into NeT as identified by the TOCOR.

Sub-Task 9.1 - Analysis of Requirements

The purpose of this sub-task is to finalize requirements and assist in identifying solutions for the remaining NeT CRs and DRs identified under the previous PWS, complete the implementation of the Storm Water Multi-Sector Master General Permit electronic forms, process work flows and functionality, and any CRs and DRs identified during work performed under this PWS. In conjunction with Task 9, the contractor shall analyze the requirements for updating the ICIS web application, batch code, and XML schema files to support data requirements under the proposed NPDES Electronic Reporting Rule and other state and Federal electronic NOI forms to be implemented in NeT under this PWS as identified by the TOCOR.

The contractor shall participate in specification meetings set up by the TOCOR with ETDD, OW, CDX, and their contractor(s) to review and finalize the processes, procedures, and software required to address CRs and DRs for NeT, as well as any defects or changes that arise under this PWS. The contractor shall, in performing this task, consider and use all appropriate sources, including ICIS-NPDES batch and system documentation, the gap analysis of Appendix A data performed under the previous ICIS PWS, Section 508 web development requirements, and input from subject matter experts at EPA to develop requirements that result in the least amount of changes being made to the ICIS-NPDES application, schema and data flows and NeT. The contractor shall strive to make changes and enhancements for ICIS-NPDES and NeT operate efficiently both from the users' perspective as well as the system performance perspective.

In addition, the contractor shall support EPA staff with finalizing the requirements for NOI forms and their associated forms and program report forms and work flow processes developed under the previous PWS for the SW MSGP electronic forms; other master general permit electronic forms, process work flows and functionality upon request by the TOCOR; and provide technical assistance and knowledge transfer to EPA staff in establishing data standards, populating data in ICIS-NPDES, implementing web services, and creating, designing and implementing form and work flow process development for other

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master general permit (MGP) electronic forms and upon request by the TOCOR. Under the previous PWS, findings under this subtask for the SW MSGP has been documented in a draft Requirements Document by EPA staff and finalized by the contractor in a Final Requirements Document. The contractor shall revise existing documentation as necessary to reflect the work performed under this PWS.

The contractor shall perform the following activities in the performance of this task:

- a) Support EPA with any late requirements resulting from the publication and re-issuance of the SW MSGP permit. OECA staff will coordinate with Program Office staff to document these late requirements, and the contractor shall use this information to update the requirements for the SW MSGP NOI and annual report forms.
- b) Support EPA staff in analyzing requirements for forms, process work flows and functionality for other state and Federal master general permit electronic forms to be added to NeT under this PWS and provide a final Technical Requirements Document for one or more MGPs upon request by the TOCOR.
- c) Work with EPA staff to transfer knowledge of, and provide support for, form development and work flow processes for work on NeT performed under the previous and current PWS.
- d) Work with ETDD and CDX to test and implement the requirements for addressing the NeT CRs and DRs identified under the previous PWS and identified while performing work under this PWS that are directly related to the contractor's work, including addressing pre-filled form data requirements, and updated storage of reference tables.
- e) Work with ETDD to define the requirements for additional functionality to support the reporting of data to ICIS-NPDES captured on electronic NOI forms, such as parameter limits, permit schedules, narrative conditions and permit schedules.
- f) In coordination with the ICIS O&M Team, identify the requirements for changes to the ICIS-NPDES web application, batch code, and XML schema files to support data requirements arising from any NOI forms being developed under this PWS, and data requirements under the NPDES Electronic Reporting Rule when it is finalized using the Appendix A gap analysis performed under the previous PWS and any changes to it upon finalization of the Rule as a baseline.
- g) Maintain the NeT CR/DR list, identifying those CRs and DRs the contractor is responsible for, to accurately reflect changes arising from new requirements and activities associated with resolving CR/DRs.
- h) Provide levels of effort (LOEs) for work upon request by the TOCOR, including tasks requested by Office of Water, such as migrating data from OW's eNOI database into ICIS-NPDES and providing bulk data upload capability into NeT.

| Task Area 9.1 Deliverables | Due Dates |
|-----------------------------------|--|
| NeT CR/DR List | Bi-weekly |
| LOEs | 2 weeks after request from EPA unless otherwise agreed to by EPA |

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| Meeting Minutes | 1 week after request from EPA |
| Updates to SW MSGP Technical Requirements | 2 weeks after request from EPA unless otherwise agreed to by TOCOR |
| Technical Requirements for Integration of Additional GP | Per a To Be Defined Schedule |

Sub-Task 9.2 - Design and Development

The purpose of this sub-task is to design and develop the functionality required to complete the NeT tool in its mission to support electronic reporting from the NPDES regulated community. NeT production functionality needs to be enhanced to ensure the user is able to digitally sign a form as a certifier for specific facilities with a particular general permit. NeT will also need functionality for submitting the data to ICIS-NPDES with the ability to return the NOI form to the preparer if ICIS-NPDES rejects the form, and to pass data with CDX that will allow certifiers and regulatory authorities to track the results of the submission in CDX filtered by general permit. This work was started under the previous PWS.

The contractor shall assist EPA staff in the design and development of additional general permits and process work flows and functionality into NeT. The contractor shall apply fixes to the NeT tool for items on the NeT CR/DR list identified under the previous PWS as well as new CRs and DRs arising from the contractor's work identified under this PWS.

The contractor shall:

- a) Assist or support EPA staff in creating forms, process work flows and functionality for other MGPs being developed under this task upon request by the TOCOR.
- b) Design and develop functionality for NeT and MGP forms and process work flows identified during the Requirements sub-task of this PWS.
- c) Working with EPA, deploy forms, processes, XML schema files in EPA's test environment to enable EPA and users to perform Beta and user testing.
- d) Coordinate with members of the ICIS O&M Team on the design and development of functionality in the ICIS-NPDES web application and batch code to support data requirements for electronic NOI forms being developed under this PWS and for data requirements under the NPDES Electronic Reporting Rule when it is finalized.
- e) In all work related to modifying NeT, the contractor shall strive to make the changes efficient from the users perspective ("usability") as well as efficient from an internal system performance and system architecture perspective (i.e., software should not do unnecessary work and should minimize the demands on the software/hardware infrastructure). The contractor shall provide due diligence when making system architect decisions giving EPA's technical staff the opportunity to participate in these decisions.
- f) Update architecture, design and user documentation based upon changes and enhancements to the NeT tool.

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- g) Coordinate with ETDD in applying changes to the XML schema files to support data requirements for electronic NOI forms being developed under this PWS and for data requirements under the NPDES Electronic Reporting Rule when it is finalized.

| Task Area 9.2 Deliverables | Due Dates |
|---|------------------------------|
| Design Meeting Notes | As Agreed to by TOCOR |
| Forms, Processes, SW, XML Schema Files in Test | As Agreed to by TOCOR |
| Revised NeT RA and RC User Manuals | Upon implementation of a MGP |
| Revised NeT Operations Manual | Upon implementation of a MGP |
| Technical Requirements for Integration of Additional GP | Per a To Be Defined Schedule |

Sub-Task 9.3 - Testing

The purpose of this sub-task is to support ETDD, OW, regional, and state staff in beta and user acceptance testing of forms, process work flows and functionality developed for NeT in EPA's test environment.

The contractor shall perform testing of selected MGP NOI related and annual report forms, process work flows and functionality, and assist EPA staff with deploying NeT software and procedures in EPA's ICIS Test environment for EPA Beta and User Acceptance Testing (UAT). EPA's acceptance of the software is contingent upon the contractor's resolution of the known Severity 1 and 2 problems and the contractor not leaving open high priority Severity 3 problems related to their work performed under this TO prior to delivery to the EPA for NCC, EPA staff, and pilot states for Test and Acceptance.

The contractor shall:

- a) Perform unit, functional and integration testing of MGP NOI related and annual report forms, process work flows and functionality.
- b) Provide support to ETDD, OW, and state staff, and facilities in beta and user acceptance testing of all forms, work flow processes, and added functionality of the NeT tool developed under this PWS. This testing will be performed utilizing EPA's test environment. EPA technical staff will test that the application is functionally correct and is acceptable from the user's perspective. The contractor shall use the test results to make, or assist EPA in making, necessary changes to the NeT software and/or processes.
- c) Perform load testing as requested by the TOCOR of functionality for selected MGP forms to test out various tools and methodologies to ensure that NeT will perform efficiently and optimally within the EPA Hardware/Software (HW/SW) environment and on the ICIS-NPDES node on the Exchange Network. The contractor will use the results to make recommendations to EPA concerning changes needed to the environments and/or ICIS-NPDES node to support the electronic reporting process and to improve the ICIS-NPDES software and process flow.
- d) Provide revised software and/or procedures to the TOCOR for testing and acceptance. Based upon the results of testing by EPA, the contractor shall make changes to the

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software and/or procedures and provide the finalized software to the TOCOR for any additional testing by EPA and final acceptance.

| Task Area 9.3 Deliverables | Due Dates |
|---|---------------------------------------|
| NeT Load Test Results | 2 weeks after completion of load test |
| New and Enhanced NeT Forms, Workflow Processes, and/or SW | Prior to start of testing cycles |
| Final Enhanced SW and Procedures | After test approval by TOCOR |

Sub-Task 9.4 - Implementation

The purpose of this subtask is to implement selected MGP NOI related and annual report forms, process work flows and related functionality, and CR/DR functionality developed under this PWS and to provide technical assistance and training to the EPA in releasing new and updated NeT electronic reporting functionality into production. In support of this task, the contractor shall:

- a) Develop an implementation schedule for the MGP selected and other forms developed under this PWS and assist EPA in maintaining an implementation schedule for MGPs to be added to NeT under this PWS and in the future.
- b) Develop a comprehensive NeT Implementation Guidance Document of procedures for promoting NeT forms and workflow processes into production for ETDD staff to follow. This document will include the locations of all files and the contents of configuration files with changes needed to release an updated version of NeT into production, along with a checklist listing the steps to follow in order to accurately implement a new or updated electronic form, workflow process, or NeT functionality.
- c) Provide technical support on the implementation of new MGP forms, process workflows and functionality for NeT developed under this PWS on EPA equipment, train EPA on the implementation procedures, and assist EPA staff with the implementation of electronic NOI related and annual report forms, process work flows, and functionality for other MGPs developed under this PWS. While actual installation of the software in EPA's environment must be done by NCC staff, technical assistance in the form of helping to analyze problems and solutions, developing special utilities and procedures shall be necessary from the contractor.
- d) Provide ongoing support in the rapid resolution of any issues/problems that occur during NeT implementation across the user community, who will include EPA Headquarters, regional and state users. The contractor shall provide technical support in the form of troubleshooting the system, revision and installation of processes to correct problems or resolve issues, initial monitoring of regularly scheduled processes, and review performance upon implementation.

The contractor shall input and track through to resolution all changes to software and procedures that have resulted from problems or issues encountered during implementation in the Change Control database, providing the PO with Problem Reports. **(C.3.4.9.6)**

| Task Area 9.4 Deliverables | Due Dates |
|-----------------------------------|------------------|
|-----------------------------------|------------------|

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|----------------------------------|---|
| Draft Implementation Schedule | As agreed upon by the TOCOR for each GP and enhancement release |
| Updated Implementation Schedule | As changes are needed |
| Meeting Minutes | 1 week after request from EPA |
| NeT Implementation Guide | Upon request by EPA |
| Revised NeT Implementation Guide | 1 week after 1 st form deployed by EPA staff, by request |
| Final SW and Procedures | Per each implementation schedule |
| Implementation Checklists | 2 weeks prior to each deployment |

TASK AREA 10 - ICIS Operation and Maintenance Support

The purpose of this task is to provide technical assistance to the EPA and the ICIS user community in the operations, maintenance and support (O&M) of ICIS.

The contractor shall:

- a) Provide ongoing technical support in the rapid resolution of any issues/problems that occur with the software and procedures implemented in the production version of ICIS, including the National Installation of the NetDMR tool and the NPDES Electronic Reporting Tool (NeT). This includes troubleshooting the system, making revisions to processes and/or software, monitoring regularly scheduled processes which run during non-business hours nightly or over the weekend, conducting periodic performance testing, recommending future infrastructure scalability specifications, updating system documentation (i.e., Software Technical Specifications, Help Files, Data Element Dictionary, design documents), and interpreting software for EPA staff.

The contractor shall provide revised software and/or procedures to the TOCOR for testing and acceptance. Based upon the results of testing by EPA, the contractor shall make changes to the software and/or procedures and provide the finalized software to the TOCOR for any additional testing by EPA and final acceptance.

The contractor shall provide this support via the telephone, electronic mail, remote access to the system, and/or on site consultation. The contractor shall support both the scheduled deployments (currently scheduled for quarterly deployments), and the emergency or unscheduled deployments (emergency fixes) of modified software and/or procedures and data fixes into EPA's hardware/software environment.

As part of their ongoing support of ICIS, the contractor shall support the upgrades to the ICIS infrastructure/platforms (all hardware/software environments) to include: upgrades and patches to hardware and software applications (i.e., Business Objects (BO), Oracle, Weblogic, and the operating system) and changes to EPA's policies (i.e., new security requirements, enterprise architecture). As part of this support, the contractor shall participate with EPA on regularly scheduled conference calls with the support team at NCC, OEI CDX staff and their contractor(s) and respond to NCC and CDX requests forwarded by the TOCOR. The contractor shall interface regularly with NCC staff in the accomplishment of this support. The contractor shall maintain the ICIS Batch Node on EPA's EN. The contractor shall support upgrades to the ICIS Batch

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Node infrastructure/platforms (all hardware/software environments), including upgrades and patches to hardware and software applications, (i.e., Next Generation Node web methods, Oracle interface, Weblogic interface, and the operating system), and changes to the ICIS Batch Node required by new or revised EPA policies.

In all work related to modifying ICIS, the contractor shall strive to make the changes efficient from the users perspective (“usability”) as well as efficient from an internal system performance and system architecture perspective (i.e., software should not do unnecessary work and should minimize the demands on the software/hardware infrastructure). The contractor shall provide due diligence when making system architect decisions giving EPA’s technical staff the opportunity to participate in these decisions.

The contractor shall continue to investigate ways to reduce the costs of enhancing and maintaining ICIS and NetDMR. Activities may include, but are not limited to, the use of Commercial-off-the-Shelf (COTS) packages where appropriate; and streamlined, enhanced, or new methodologies.

- b) Provide design deliverables that include: documentation of architectural and coding design alternatives that include the contractor’s analysis of the pros and cons leading to the final deliverables; coding comments; application code that follows published standards and captures the developer’s description and intention of code routines; and corrected or enhanced comments when the contractor modifies the software to rectify deficiencies.
- c) Initially deploy all software and modified data in the EPA ICIS Test environment (to include the NetDMR and NeT Test environments) according to the scheduled delivery date so that EPA and users can perform Beta Testing and then User Acceptance Testing (UAT). The contractor shall make all EPA required changes resulting from Beta Test and subsequently the UAT and review of the new or revised code before the contractor delivers the software for deployment to the ICIS production server at NCC. Once software has been deployed into the ICIS Production environment, the contractor shall support the deployment to the ICIS Stage environment within two weeks of deployment to Production.
- d) Evaluate the problems or issues identified by the ICIS user community and/or forwarded by EPA staff as designated by the TOCOR. This includes interpreting if questions are from a lack of understanding of the ICIS application including how the data was migrated, due to a data migration problem, a problem with the system, or a request for a change in, or new, functionality. The contractor shall determine whether the identified issue is a defect or a change request and assign a severity level (1, 2, 3, 4) and a priority (urgent/high/medium/low). The contractor shall develop a Level of Estimate (LOE) for change requests or fixing problems as requested by the TOCOR. The contractor shall track all defects and change requests and their status and provide a current listing to the TOCOR on a monthly basis. The contractor shall provide the TOCOR with a written defect summary for the bi-weekly project meetings.
- e) Evaluate and monitor ICIS for areas of performance tuning (e.g., response time, usage of storage and memory, etc) and optimization to improve system stability and performance on an ongoing basis. The contractor shall implement system monitoring procedures to initially establish a baseline, and thereafter, use these monitoring tools to continuously monitor the system to identify areas of instability, unacceptable performance, or bottlenecks. Based on findings, the contractor

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shall identify areas where modifications to the system would significantly improve system performance and/or stability to include the environment at NCC. Upon review and approval by the EPA TOCOR or designated technical staff, the contractor shall make the appropriate software or configuration changes following the standard methodology in place for enhancing and fixing ICIS.

- f) Ensure that all changes to ICIS are analyzed from the overall ICIS perspective looking across the system to provide consistency in the implementation of ICIS System functionality and capability. Changes and/or enhancements often come in from a FE&C user, an Air user or a NPDES user. Some requests for changes will be the result of work being done on Phase III (AFS Modernization) as part of the integration of AFS Modernization with ICIS. For instance, when an enhancement or change has been implemented for the other program, a like change should be made to the program requesting the change.
- g) Maintain an ICIS system at the contractor's site configured to replicate the ICIS production environment housed on NCC servers. The contractor's ICIS system shall be as operationally the same as the NCC production environment as is feasible and reasonable (i.e., contractor can use a SUN 210 instead of a SUN 880, but if Oracle is on an IBM box running AIX in ICIS, the contractor should be running AIX and not LINUX). The contractor shall use this environment for development, testing of problem fixes, testing of enhancements and general troubleshooting and problem investigation and resolution.
- h) Support EPA and the ICIS user community with development and modification of Business Objects reports, universes, and objects needed to support both the federal enforcement program, Air stationary source program, and the NPDES program. The contractor shall participate in meetings and/or conference calls to define specific reporting requirements, and then build and test reports as requested.

The contractor shall support EPA in the maintenance and enhancement of the ICIS OECA Suite of Measures (OSMS) Dashboard which supports OECA management and the ICIS FE&C user community using the Business Objects Xcelsius tool. Work may include gathering requirements, developing prototypes, support for demonstrations, and making the dashboard production ready. It is anticipated that updates and/or enhancements of the dashboard will be needed in FY2015.

- i) Maintain the process and data structures which support the exchange of data between ICIS and the Facility Registry System (FRS). This includes analysis, making any necessary changes to the exchange software and/or data structures, data formats, or requirements in either ICIS or FRS, meeting as necessary with the FRS contractor to work out issues and schedules, monitoring the exchange as it is running, and reporting any problems to EPA. The contractor shall complete the analysis of the feasibility of using a technology such as Web Services for a more real time exchange during the period of this PWS. Based upon a review of the analysis and the LOE provided, a determination will be made between EPA and the contractor on whether or not this task can be completed during the period of this PWS. The contractor shall maintain the FRS Procedures document, making updates as necessary.
- j) Maintain the ICIS Operations Manual. The contractor shall work with EPA technical staff to ensure that the ICIS Operations Manual contains all the current procedures, run books, call plans, operations, process flow diagrams, and schedules required to ensure that ICIS is operating

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correctly and efficiently. As part of this task, the contractor shall meet with EPA as necessary to explain (and then document) the “behind the scenes” activities and to brainstorm on any other production control activities that are necessary in the short and then long term. This Operations Manual shall include the current problem resolution process both at the contractor’s end and within EPA. The contractor shall provide updates to the Manual to incorporate the integration of the Air stationary source program into ICIS to during this TAS.

- k) Maintain the ICIS Data Element Dictionary (DED). The contractor shall work with EPA to ensure that the DED remains current with each release; scheduled and unscheduled. For each release of ICIS, the contractor shall include changes to the DED as part of the standard release and testing package. EPA will provide feedback as part of their normal Beta and UAT testing activities.
- l) Maintain the NetDMR tool that CDX hosts and the ICIS NetDMR interface. The contractor shall work with EPA NetDMR staff, OEI CDX staff and their support contractor(s) to support changes to the NetDMR software tool and the ICIS NetDMR interface. The contractor’s support shall include: upgrades and patches to NetDMR screens, database and code; upgrades and patches to code that handles the processing of NetDMR flow requests to ICIS and the return of results to NetDMR; upgrades and patches to SQL statements used for extracting data from ICIS for NetDMR; upgrades and patches to the mapping of SQL statements into XML file format using tools available through CDX such as Velocity Mapper; and maintenance of the copy of ICIS and de-normalized tables used by the ICIS NetDMR interface. It is anticipated that during the period of this TAS, analysis and possibly enhancements will need to be made to NetDMR to provide the capability to handle the growing number of users.

Note: The TOCOR will keep the contractor informed of planned CDX upgrades and patches and provide the contractor with information on unplanned activities as soon as the OEI CDX staff provides them to the TOCOR.

- m) Deliver the final software to NCC for security scanning and review, or the results of the scan performed by the contractor, prior to the planned deployment date. The contractor shall make all the TOCOR recommended changes from the security scan and review prior to the contractor’s deployment to the ICIS production server.
- n) Update the document titled “Summary Statistics” dated February 8, 2008 which contains “summary level analysis of metrics pertinent to the various types of artifacts that have been constructed over the years on the ICIS project”. This document should be updated to reflect information as of the completion of PCS Modernization and AFS Modernization, Release 1.

| Task Area 10 Deliverables | Due Dates |
|---|---|
| Scheduled Deployments: Revised SW and/or Procedures Final SW and/or Procedures Revised SW Tech. Specifications | Maximum of quarterly Day of deployment into production As needed with each deployment |
| Emergency Deployments or Data Fixes Revised SW, Procedures or Scripts | TBD for each occurrence |

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| Final SW, Procedures, or Scripts | After test signoff by EPA |
| Meeting Notes | Within 3 days of issue identification |
| Issue and or Design Decision Papers | Within 5 business days of meeting |
| Summary of Defects and Change Requests | Bi-weekly |
| LOEs | 2 weeks after requested by TOCOR |
| Proposals for Areas of Performance Improvements and Optimization | As part of each Production deployment |
| ICIS Interface Issues | As identified |
| New and/or Modified BO Universes, Objects, and Reports | As part of each Production Deployment |
| ICIS OSMS Dashboard Revisions | Per an agreed upon schedule |
| Revisions to FRS-ICIS Exchange Procedures | 2 weeks after issue/change is identified |
| Final Revisions to FRS-ICIS Exchange Procedures | 2 weeks prior to PWS end date |
| Analysis of Using Web Services for the FRS-ICIS Exchange | Per the schedule |
| Revisions to Operations Manual | Quarterly |
| Final Revision to the Operations Manual | 2 weeks prior to PWS end date |
| NetDMR SW Tool Upgrades and Fixes | Per an agreed upon schedule |
| Final SW to NCC for Security Scanning | Per an agreed upon date prior to the deployment |
| New and/or Modified ICIS Node | Per OEI's maintenance schedule; no more than once per year |
| Updated ICIS Summary Metrics Document | Within 3 months of PWS start date |

TASK AREA 11 - ICIS Enhancements Support

The purpose of this task is to provide technical assistance to the EPA for the enhancement of ICIS and related Electronic Reporting Tools. An enhancement is defined as any modification to the system that is not documented in the most current ICIS Software Technical Specifications (STS) or the Updated NetDMR Design document as of the beginning of this PWS. The contractor shall:

- a) Provide technical support in performing analysis to determine the extent of modifications required to ICIS necessary to support the enhancement. Support includes any of the following: reviews and/or alternative analysis of enhancement options; feasibility papers; flow charts, pseudo-code and/or use cases for each functionality of the system such as the details and calculations used in determining significant non-compliance (SNC), reportable non-compliance (RNC), and determining quarterly non-compliance reporting (QNCR); conducting appropriate modeling techniques and diagrams depicting the process flow and objects or modules of the system; final screens; final definitions of XML schemas and/or instance documents for associated batch transactions; database updates and mapping; details of how the required functionality shall be accomplished in the system (i.e., activity diagrams, use cases, process/state diagrams); definition or update of Business Objects universes and report layouts; revised Software Technical Specifications; and submitting level of efforts (LOE) estimates for the enhancements and revision of the STS. The contractor shall participate in "lessons learned" discussions to ensure sound and practical approaches and participate in conference calls/meetings attended by the TOCOR, other EPA technical staff and users.

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In all work related to system enhancements, the contractor shall strive to make the enhancement efficient from the users perspective (“usability”) as well as efficient from an internal system performance perspective (i.e., software should not do unnecessary work and should minimize the demands on the software/hardware infrastructure).

- b) Ensure that all changes to ICIS, the NetDMR Tool, the ICIS NetDMR Interface, and NeT are analyzed from the overall ICIS perspective looking across the system to provide consistency in the implementation of ICIS System functionality and capabilities. Enhancements often come in from FE&C, NPDES, Air, NetDMR, or NeT users to the TOCOR and/or EPA staff and are prioritized; and a formal written request is forwarded to the contractor. The contractor shall ensure that when an enhancement has been implemented for the other program, a like change should be made to the program requesting the change.
- c) Provide technical support to the TOCOR in performing the software modification needed to support the enhancement. All software and procedures shall be thoroughly tested by the contractor prior to delivery to the TOCOR for EPA internal testing, CDX Test and Acceptance for NetDMR and NeT and NCC. The contractor shall ensure that there are no known Severity 1, 2 or 3 problems. The contractor shall correct any problems resulting from testing by EPA and the ICIS user community prior to deployment.
- d) Provide supporting documentation for software and procedures developed for ICIS for delivery to the TOCOR and the ICIS Technical Consultant(s) at NCC. Provide technical support in the CDX and NCC test and acceptance activities. The contractor shall incorporate changes from the TOCOR as identified by the CDX and NCC testing to the software and procedures.
- e) Perform independent integration and system testing of the enhancements being made to ICIS, fully exercising an approved Test Plan. The contractor shall document the test results and provide the documentation to the TOCOR as an addendum to the Test Plan. The contractor shall incorporate the TOCOR written requests for changes to the software and/or processes based upon the test results and verify that the changes have taken effect.
- f) Track all errors and changes to ICIS software and processes utilizing the ICIS Change Control procedures.
- g) Modify the reference document for programmers to reflect changes that result from the enhancement. This includes: a list of programs that have been implemented; documents program calls; charts interrelationships of programs; and details the environmental requirements for successful execution of programs.
- h) Provide technical support by answering questions and resolving issues raised by CDX and NCC staff and their contractor(s) for the installation of the enhanced ICIS software and setting up procedures on EPA equipment. The actual installation of software in EPA’s production environment shall be done by the EPA’s NCC staff and their contractor(s). CDX staff and their contractor(s) will do the actual installation of the contractor’s NetDMR software in the CDX production environment. The contractor shall provide technical assistance with special utilities, conversions, and other procedures (i.e.: addressing QA issues for data that needs to be resolved on the database side) at the request of the TOCOR.

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- i) As requested by the TOCOR, provide technical support to EPA and its state partners in analyzing and evaluating the feasibility of design options for software enhancements or interfaces to ICIS, NeT, NetDMR and ICIS NetDMR Interface. This technical support shall include the review of documentation and/or participation in conference calls and/or meetings with specified EPA staff from OECA and OEI as well as states, participation in “lessons learned” discussions with the intent of ensuring that designs that are part of, or interface with, ICIS, NeT, NetDMR and the ICIS NetDMR Interface are both sound and practical.
- j) The contractor shall deliver the final software to NCC for security scanning and review, or the results of the contractor’s scan, prior to the contractor’s planned deployment date. The contractor shall make all the TOCOR recommended changes from the security scan and review prior to the contractor’s deployment to the ICIS production server.

The following deliverable due dates will be negotiated for each enhancement but should not exceed the due dates specified below.

| Task Area 11 Deliverables | Due Dates |
|---|---|
| Draft Analysis of Enhancement Impact on SW to include LOE | Within 2 weeks of request by TOCOR |
| Final Analysis of Enhancement Impact on SW | 2 weeks after receipt of comments from EPA |
| Revised Software Technical Specifications | Concurrent with release of SW to Production |
| Draft Revised SW and/or Procedures | Concurrent with release of SW to Production |
| Final Revised SW and/or Procedures | 3 weeks prior to Production deployment |
| Addendum to Test Plan containing Test Results | Within 2 weeks of completion of testing |
| Draft Revised System Documentation | Within 30 calendar days of request by EPA |
| Final Revised System Documentation | 2 weeks after receipt of comments from EPA |
| Analysis and Reviews (verbal and written) | 2 weeks after request by EPA |
| Change/Defect Report | Bi-weekly |

TASK AREA 12: Training

The contractor shall assist the EPA in the ongoing training of EPA Headquarters, regional, state, and Air local agencies in the use of ICIS at the request of the TOCOR. Current training for ICIS-NPDES is 5 days, FE&C runs 3 days, and ICIS-Air runs about 5 days. All training sessions include report and retrieval training.

As part of this task, the contractor shall:

- a) Develop new, or enhance existing, training materials and training scenarios as enhancements are made to ICIS. Current training is given as instructor-led webinar sessions using ICIS-NPDES, ICIS-Air Web or ICIS-FE&C based training scenarios. The instructor-led courses consist of Microsoft Power Point based functional overviews, instructor-led system scenarios, and instructor guided/user run exercises.
- b) It is anticipated that EPA staff will continue to deliver the training. To support EPA staff, the

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contractor shall, as part of this task, provide a minimum of two train-the-trainer webinars to various EPA staff that will lead the training for each course.

- c) All training will be delivered using an EPA ICIS Staging environment which allows access to all users.
- d) Create and maintain a set of data that includes scenarios that the contractor can export and that shall be available for import for the next training session.
- e) Support EPA in creating computer based training materials from the PowerPoint materials which can subsequently be posted for users to take as time permits or the need arises for additional training in a subject area.

| Task Area 12 Deliverables | Due Dates |
|---------------------------------------|--|
| Draft Training Plan and Schedule | TBD |
| Revised Training Plan and Schedule | 2 weeks after receipt of comments from EPA |
| New and/or Revised Training Materials | Per the Training Schedule |
| Revised Training Materials | 10 business after receipt of EPA comments |

VI. QUALITY ASSURANCE SURVEILLANCE PLAN

Refer to Attachment G in the Task Order.

VII. TRAVEL

Long distance travel costs approved in advance by the TOCOR are permitted to complete this assignment. Long distance travel is considered to be travel outside the Washington DC Metropolitan area.

VIII. EPA Contacts

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Attachment A

Project Employee Confidentiality Agreement

The contractor recognizes that Contractor employees in performing this contract may have access to data, either provided by the Government or first generated during contract performance, of a sensitive nature which should not be released to the public or certain Contractor personnel without Environmental Protection Agency (EPA) approval. Therefore, the Contractor agrees to obtain written confidentiality agreements from employees working on requirements under this contract including subcontractors and consultants.

Such agreements shall contain provisions which stipulate that each employee agrees that the employee shall not disclose, either in whole or in part, to any entity external to EPA, the Department of Justice, or to any employee of the Contractor any proprietary or confidential business as well as any financial, cost or pricing information (as defined in FAR Section 27.401) without first obtaining the written permission of the EPA Contracting Officer.

The EPA may terminate this contract for convenience, in whole or in part, if it deems such termination necessary to prevent the unauthorized disclosure of information to outside entities. If such a disclosure occurs without the written permission of the EPA Contracting Officer, the Government may terminate the contract, for default or convenience, or pursue other remedies as may be permitted by law or this contract.

The Contractor further agrees to insert in any subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this clause, including this paragraph, unless otherwise authorized by the Contracting Officer.

This agreement shall be in effect as long as the information or data remains proprietary or confidential.